

**Delaware Department of Transportation
Division of Transportation Solutions
Design Guidance Memorandum**

Memorandum Number 2-4

1. Road Design Manual 2. Bridge Design Manual 3. Utilities Design Manual
4. Real Estate Manual 5. Standard Specifications 6. Standard Construction Details

Title: Bridge Approach Slabs Effective date: June 1, 2002

Sections to Implement: _ Road, X Bridge, X PMT, _ Design Support, X Specification, _ Utility, _ Real Estate, X Quality Management, X Field Services, X District, Other _____

I. Purpose:

To ensure smooth riding surface thru approach slabs

II. Design Guidance:

New Construction:

1. Except in the area of superelevation transition, the cross slope of the bridge and the roadway should be same.
2. Type C backfill under the approach slab should be 98% compaction. The limits of this 98% compaction should be shown on the plan.
3. Design personnel should layout grades at ends and center point of the approach slab, including the beginning and the end, along every lane and shoulder line, or as an alternate along beam lines.
4. Benching may be specified for a better and easier compaction and for a better support to the approach slab.
5. Use of elastomeric joint seal for the joint between the concrete pavement and the approach slab is recommended.

Reconstruction or Overlay:

1. The approach slab grades should be carefully laid out to provide a smooth transition from the road to the bridge where the cross slope may be different.
2. Design personnel should request adequate elevation/grade survey on both adjacent roadway and bridge along all travel lanes and shoulder lines.
3. Reconstruction of a portion of the adjacent roadway may be required in order to provide a smooth travel surface.
4. Raising of settled approach slabs and/or grinding of high areas to proper elevations should be considered.
5. Follow step 3 and 5 in New Construction above for the grades and joint seal on the approach slab.

III. Justification:

This guidance is intended to correct the bumpy ride on the bridge approach slabs, which have been observed by many motorists.

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